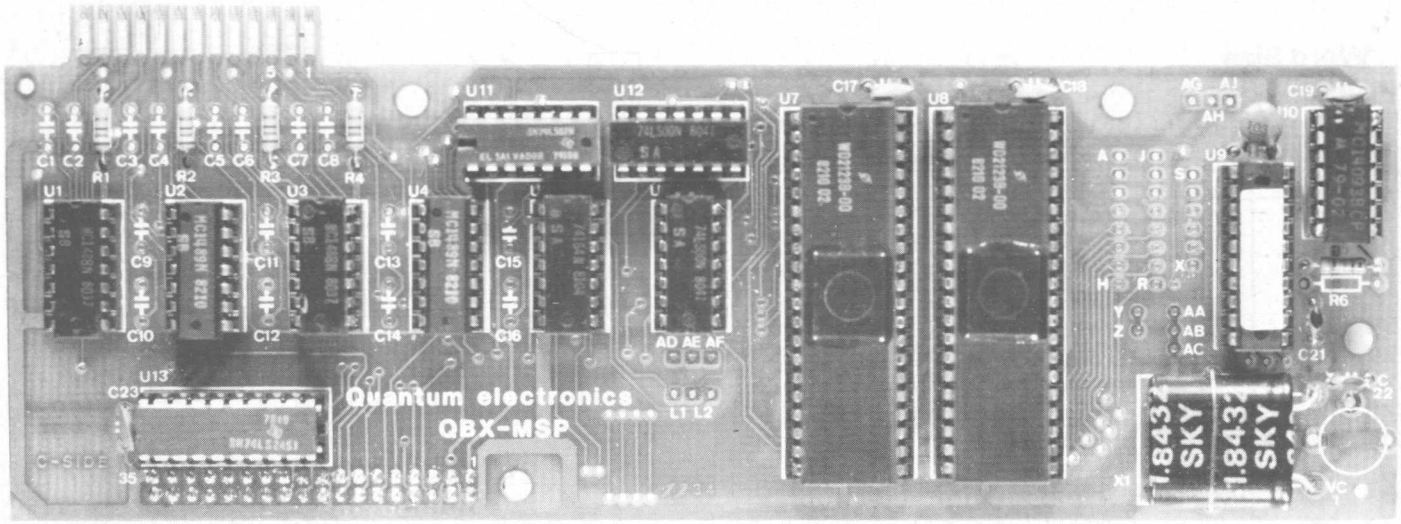
QBX - MSP

MULTI SERIAL PORT

PRELIMINARY
Specifications subject to change



- 2(QBX-MPS/2), or 4(QBX-MPS/4) asynchronous channels
- uses Western Digital WD2123 devices
- 16 independent baud rates for each channel (50-19200 baud)
- 5-8 bits per character
- 1, 16, or 64 times clock rate sampling
- line break detection and generation
- odd and even parity generation and detection
- double buffering of data
- overrun and framing error detection
- asynchronously compatible with industry standard 8251A
- diagnostic local loop back mode
- iSBX* bus compatible
- interrupt generation
- on board wait state generation
- RS232 voltage level drivers and receivers
- QBN-MSP-CON available to provide connection to normal D-type connector
- enjoys advantages of the SBX* bus
  -higher system throughput
  -lower power requirements

The QBX-MSP allows 2 or 4 asynchronous ports on a double sized iSBX* module. Each port has an individually programmed baud rate generator that allows transmission rates from 50 to 19200 baud. Once set up, the handling of the control and data ports is compatible with most software written for the 8251A serial communications controller in the asynchronous mode. A facilty exists for a local loop back test and interrupt gating is provided to generate an interrupt to the host processor. An on board wait state generator allows full speed operation of the microprocessor.

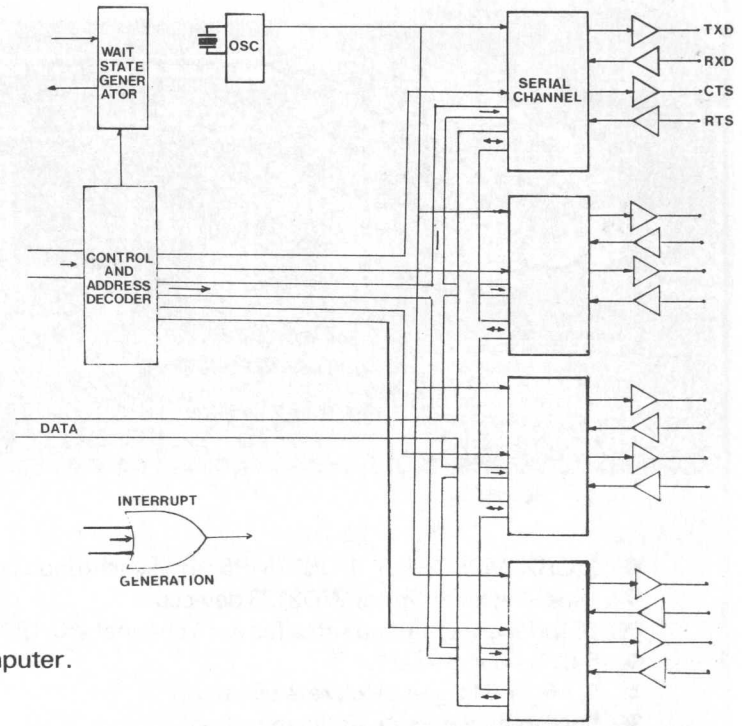
* iSBX, iSBC and Multibus are Intel trademarks.

SPECIFICATIONS

Word Size
Data - 8 bits

QBX Address	Control	Function
X0 hex	R/W	Data Channel A
X1 hex	R	Status Channel A
X1 hex	W	Mode/Command Channel A
X2 hex	R/W	Data Channel B
X3 hex	R	Status Channel B
X3 hex	W	Mode/Command Channel B
X4 hex	W	Baud Rate Channel A
X5 hex	W	Baud Rate Channel B
Channels C and D only on QBX-MSP/4		
X8 hex	R/W	Data Channel C
X9 hex	R	Status Channel C
X9 hex	W	Mode/Command Channel C
XA hex	R/W	Data Channel D
XB hex	R	Status Channel D
XB hex	W	Mode/Command Channel D
XC hex	W	Baud Rate Channel C
XD hex	W	Baud Rate Channel D

Note: The value of "X" is determined by the host iSBC* computer.



Access Time
Worst case read/write 700nS

Serial Communications
4 independent RS232 level compatible ports
RS232 signals per channel: Data in, Data out, CTS, RTS
Asynchronous Baud Rates: 50, 75, 110, 134.5, 150, 200, 300, 600, 1200, 1800, 2400, 3600, 4800, 7200, 9600, 19200.
5-8 bit character.
1, 1.5, 2 stop bits.
Odd/even/no parity.
Diagnostic loopback.

Interrupt
An interrupt may be generated for each channel in the following circumstances (not all simultaneously):
Break detect, Transmitter ready, Receiver ready, and Transmitter empty

Power Requirements
5V @ 537mA (MSP/2 @ 411mA), +12V @ 53mA (MSP/2 @ 26mA), −12V @ 46mA (MSP/2 @ 23mA)

Size
Width: 72.4mm (2.85 in) Length: 190.5mm (7.5 in)
Height: 17.5mm (0.69 in)

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